United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 W. Jackson Blvd.
Chicago, Illinois 60604

Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

U.S. EPA Proposes Cleanup Plan for Third Site

Zionsville, Indiana **November 2000**

Public Comment Period

U.S. EPA will accept written comments on its recommended alternative presented in the EE/CA during a 30-day public comment period: November 13 to December 13, 2000.

Public Meeting

Requests for a public meeting on the EE/CA may be directed to Susan Pastor, Community Involvement Coordinator, (312) 353-1325, pastor.susan@epa.gov

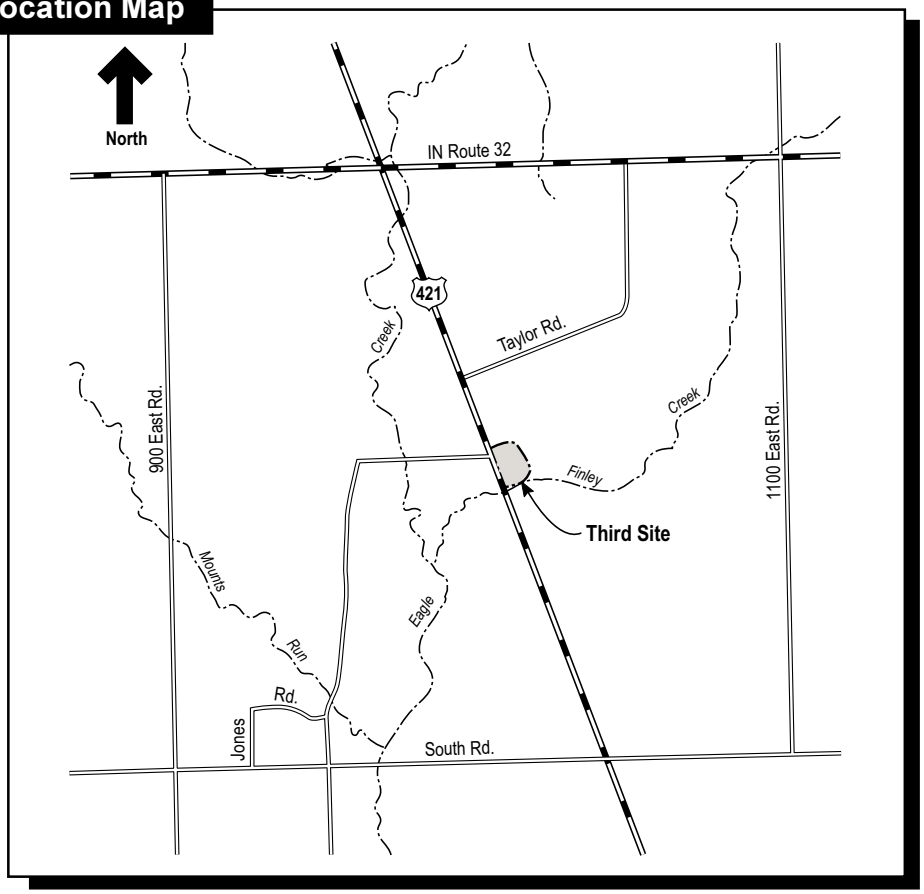
Information Repository/ Administrative Record

The EE/CA and other site-related documents are available for review in the site Information Repository at:

Hussey Memorial Library
250 North 5th Street
Zionsville, IN

An Administrative Record, which contains the information upon which the selection of the cleanup plan will be based, has been established at the library and at the U.S. EPA Records Center, Chicago, Illinois.

Location Map



Introduction

The U.S. Environmental Protection Agency (U.S. EPA) has approved a study called an Engineering Evaluation/Cost Analysis (EE/CA) for the Enviro-Chem Third Site in Zionsville, Indiana, commonly referred to as Third Site. The EE/CA analyzed and compared cleanup alternatives for the four areas of contamination at Third site: the pool of mixed liquid chemicals trapped beneath the ground surface referred to in the EE/CA as "dense non-aqueous phase liquids (DNAPLs)," on-site soil, and two ground-water areas of contamination (plumes).

This proposed plan announces U.S. EPA's recommended cleanup alternative. It describes the recommended alternative and the other alternatives that were evaluated in the EE/CA. A detailed description of the recommended alternative and the other alternatives reviewed is in the EE/CA[1].

[1]Section 300.415 (b)(4)(I) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 113(k)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires publication of a notice describing U.S. EPA's recommended alternative. The EE/CA must also be made available to the public for comment. This Proposed Plan is a summary of information contained in the EE/CA for the Enviro-Chem Third Site. Please consult the EE/CA for more detailed information.

Public input on U.S. EPA's recommended alternative is important to the cleanup process. Based on new information obtained through public comment, U.S. EPA may modify its recommended alternative or select another alternative presented in this proposed plan. The public is encouraged to review and comment on U.S. EPA's recommended alternative.

Site Background

Third Site is an approximately 1-acre site located north of Zionsville, in Boone County, Indiana, approximately 10 miles northwest of Indianapolis. The site is on the east side of U.S. Highway 421 about one mile south of Highway 32. It is bordered on the east by the Northside Landfill, on the south by Finley Creek, on the west by Highway 421, and on the north by a residential property and construction material recycling facility. The land west of Highway 421 is pasture land for a commercial horse breeding facility. The site is located in an area that is primarily agricultural with some areas of commercial and industrial land uses.

A home and recreational pond were built by the property owner in 1986. The pond was created by excavating soil 15 feet deep. The excavated soil was used to build a berm on three sides of the pond and to grade the area between the pond and Finley Creek.

The site was used in the mid- to late-1970s, by Enviro-Chem for tank and drum storage and truck parking. U.S. EPA believes these activities caused soil and ground-water contamination. Storage and/or disposal activities have not occurred since 1983. Soil and ground-water samples taken in 1987 and 1992 by the companies determined responsible for the contamination and samples taken in 1998 by U.S. EPA revealed elevated levels of Volatile Organic Compounds (VOCs) and semi-VOCs in the site's soil, ground water and surface water.

Removal Actions

In Spring and Summer 1996, the companies' contractor completed the "Finley Creek Realignment Project." The project consisted of shifting a portion of Finley Creek 40 feet away from an on-site pond and the source area of soil contaminants. This was done to prevent the potential release of contaminants into Finley Creek. An outfall pipe was also installed from the on-site pond to the new bank of the realigned Finley Creek to allow overflow discharge from the pond.

EE/CA Activities

Samples were taken in 1999 and 2000 to determine the nature and the extent of VOC contamination at the site so cleanup alternatives could be evaluated, and a removal action could be selected. The investigation included soil, ground-water, surface-water and sediment samples. The EE/CA was finalized in October 2000.

Summary of Site Risk

A streamlined risk assessment, which is a focused evaluation of the risk posed to human health and/or environment by the presence of specific pollutants, was conducted as part of the EE/CA. Six VOCs were identified as the contaminants of concern based on historic information and recent sampling at the site. The following compounds were found in site soil and ground water: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2 dichloroethene (cis-1,2 DCE), vinyl chloride, trans-1,2 dichloroethene (trans-1,2 DCE), and 1,1-Dichloroethene. The risk assessment focused on health risks posed by ingesting, touching, and inhaling VOCs in the ground water, soil, surface water, and sediment.

Human Health Risks

Based on the levels of contamination in ground water at Third Site, there is a risk of developing a form of cancer and/or other adverse health effects such as liver, kidney, and nervous system disorders from repeated drinking of and repeated skin contact with the ground water. Also, while the levels of soil contamination are not likely to pose a significant risk to human health, they are acting as a continuous source of contamination to ground water and therefore a continued source of risk from the ground water. The area of pooled chemicals beneath the surface also poses a risk to human health and, like the shallow contaminated soil, it also acts as a continuous source of contamination to the surrounding ground water. Low levels of contamination found in Unnamed Ditch and Finley Creek do not pose a significant risk to human health.

Environmental Risk

The low levels of contamination found in the sediment and surface water of Unnamed Ditch and Finley Creek were compared to standard U.S. EPA ecological standards for determining potential environmental damage. None of the contaminants of concern found at the site exceed these standards, so there is little, if any, risk to the aquatic

Evaluating the Alternatives

U.S. EPA typically uses three criteria to compare cleanup alternatives in the EE/CA and to recommend a practical cleanup alternative. The evaluation criteria consists of:

1. Effectiveness - considers the length of time needed to implement a cleanup alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
2. Implementability - considers the technical and administrative feasibility of implementing the cleanup alternative, such as availability of goods and services.
3. Cost - includes estimated capital, operation, and maintenance costs, as well as present worth costs. Present worth cost is an alternative's total cost over time in terms of today's dollars.

environment in Unnamed Ditch and Finley Creek based on the current levels of contamination.

Recommended Alternative

The recommended alternative is a combination of cleanup actions for the subsurface liquid chemical pool, soil, and the two ground-water plumes. The recommended alternative includes:

Subsurface Liquid Chemical Pool

This area would be contained using a sheet pile wall to surround the pooled liquid chemicals and then the area inside the wall would be pumped out to remove the liquid pools. After pumping, a chemical would be injected into the same area to break down any remaining chemicals left in the soil and ground water. A cover would then be placed over this contained area to prevent any further rainwater from mixing in with the pooled chemicals.

Shallow Soil

A treatment process known as Soil Vapor Extraction (SVE) would be used to remove VOCs from the shallow soil at Third Site. This process uses perforated piping placed in trenches (or wells) through the soil and pulls a stream of air from the soil to transfer the contaminants from the soil into the air stream. The air is then treated with carbon and any water removed from the soil during the process can be treated at a wastewater treatment facility already in use at the neighboring Enviro-Chem site.

Ground Water

Wells with pumps installed would be placed in both plumes to continuously remove contaminated ground water from the affected area. This pumping process would continue for approximately three months and is expected to decrease the levels of contamination by approximately 90 to 95 percent (one order of magnitude). After this pumping is completed, remaining levels of ground-water contamination would be allowed to naturally decrease. Routine sampling of ground water would be done during this period to make sure that the levels continue to decrease.

Institutional controls, such as deed restrictions, will be placed on the properties to prevent the use of surface water and ground water in this area. The total cost for cleaning up Third Site is approximately $4.5 million.

This combination of cleanup actions is considered the most favorable of all alternatives because it meets the requirements of all of U.S. EPA's evaluation criteria (see box on previous page). Although this combination of cleanup actions is not the least expensive (nor the most expensive), it proves to be the most favorable alternative for protecting human health and the environment.

Alternatives Considered

The EE/CA reviewed five alternatives for cleaning up the subsurface liquid chemical pool, two alternatives for soil, and four each for the ground-water plumes, as listed below.

Subsurface Liquid Chemical Pool Alternatives

Containment - $1.3 million

Chemical Oxidation - $620,000

Localized Pump and Treat - $1.6 million

Excavation and Treatment - $7 million

Containment, Capping, Dewatering, and Chemical Oxidation - $1.9 million *(Recommended Alternative)*

Shallow Soil Alternatives

Excavation and Off-Site Disposal - $1.1 million

Soil Vapor Extraction - $650,000 *(Recommended Alternative)*

Ground-Water Plume 1

Monitored Natural Attenuation - $780,000

In-situ (In-place) Treatment - $1.4 million

Focused Pump and Treat - $970,000 *(Recommended Alternative)*

Long-Term Pump and Treat - $2 million

Ground-Water Plume 2

Monitored Natural Attenuation - $500,00

In-situ (In-place) Treatment - $690,000

Focused Pump and Treat - $900,000 *(Recommended Alternative)*

Long-Term Pump and Treat - $1.3 million

The Next Step

U.S. EPA will consider public comments received during the public comment period (November 13 to December 13) before selecting a final cleanup plan. The cleanup plan will be described in a final decision document that will be available for public review. After the final action is chosen, U.S. EPA will meet with the companies believed responsible for the site contamination and request that they fund the cleanup. Following negotiations, the final action will be designed and implemented.

Additional Information

If you have questions about the information in this Proposed Plan or would like additional information about Third site, please contact:

U.S. EPA Contacts

Susan Pastor, P-19J
Community Involvement Coordinator
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e-mail: pastor.susan@epa.gov

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Remedial Project Manager
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U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604
Toll-free: 1-800-621-8431
(9:30 a.m.- 6 p.m. EST, weekdays)

State Contact

Myron Waters
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100 North Senate Avenue
Indianapolis, IN 46206-6015
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e-mail: wwaters@dem.state.in.us

If you did not receive this fact sheet in the mail, you are not on the mailing list for Third Site. To add your name, or to make a correction, please fill out this form and mail it to:

Susan Pastor
U.S. EPA Region 5
Office of Public Affairs (P-19J)
77 West Jackson Boulevard
Chicago, Illinois 60604

Name _____

Address _____

City _____ State _____ Zip Code _____

Affiliation _____

Once you are on the mailing list, you will automatically receive information from U.S. EPA regarding the Cleanup Plan for Third Site.

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Cleanup Plan for Third Site

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Comment Sheet

U.S. EPA is interested in your comments on the cleanup alternatives indicated in the Proposed Plan. U.S. EPA will consider public comments before selecting a final cleanup for Third site. Please use the space below to write your comments, then fold and mail this form. Comments must be postmarked by December 13, 2000. Comments may also be faxed to Susan Pastor at (312) 353-1155 or sent via E-mail to *pastor.susan@epa.gov*. If you have any questions, please contact Susan Pastor at (312) 353-1325 or toll free: 1-800-621-8431.

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Susan Pastor
Community Involvement Coordinator
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